

DESCRIPTIONS OF SOME NEW SPECIES OF WEST
AUSTRALIAN PLANTS.

BY W. V. FITZGERALD, F.S.Sc., LOND., F.R.H.S., ENG.

(Communicated by J. H. Maiden, F.L.S.)

EPACRIDEE.

LEUCOPOGON GLAUCIFOLIUS, sp.nov.

Erect or spreading, usually under 1 foot high, the branches finely hairy. Leaves alternate, linear, rigid, pungent-pointed, convex, with slightly recurved margins or nearly flat, glabrous or scantily tomentose above, finely striate and glaucous beneath, 4-6 lines long. Peduncles all axillary, extremely short, erect or scarcely spreading, mostly 3-flowered and along with the bracts, bracteoles and calyxes finely hairy. Pedicels very short. Bracts minute, mucronate. Bracteoles ovate, prominently mucronate, about $\frac{1}{3}$ as long as the calyx. Sepals subulate, about $1\frac{1}{2}$ lines long. Corolla white, about $2\frac{1}{4}$ lines long, tube slightly ventricose, much shorter than the calyx; segments slightly longer than the tube, revolute with glabrous, acutely pointed tips. Anthers attached above the middle, oblong, rounded at both ends, without sterile tips. Hypogynous disk large, lobes ovate, obtuse, free to the base, $\frac{2}{3}$ the length of the ovary. Ovary glabrous, usually 5-celled, but often incompletely 6-8-celled. Style rather stout, of moderate length, with a slightly hirsute capitate stigma. Fruit almost globular, flat-topped, about $1\frac{3}{4}$ lines long, with 5 broad bicarinate angles or ribs, epicarp yellow, mesocarp slightly pulpy, endocarp not very hard and rather thin.

Loc.—Midland Junction and vicinity; in sandy heathy spots. Flowers and fruit (December, 1902; W. V. Fitzgerald and C. R. P. Andrews).

This species differs from *L. brevicuspis*, Benth., in foliage, and from that species and *L. propinquus*, R.Br., in smaller habit, in the lobes of the hypogynous disk and most essentially in the fruit. Without the fruit it would be readily mistaken for a small form of the latter.

LILIACEÆ.

HENS MANIA, gen.nov.

Flowers hermaphrodite and neuter on the same axis. Perianth shortly persistent, of 6 equal segments, united below the middle into a tubular base. Stamens 3, inserted at the base of the inner segments and not protruding beyond them; filaments flattened; anthers linear, bilobed at the apex, more or less connate, opening along the inner face in longitudinal slits. Ovary 3-celled, with 2 ovules in each cell, on an axile placenta. Style filiform, entire, with a minute stigma. Fruit capsular, 3-celled, dehiscing loculicidally into 3 valves. Seeds 2 in each cell, uppermost erect, lowest pendulous, funicle thickened into a prominent strophiole; testa crustaceous, shining black.

A tufted perennial, with terete leaves and simple bracteate scapes. Flowers in white woolly turbinate heads, the inflorescence surrounded by an involucre of loosely imbricated bracts.

Technically the structure of the flower is similar to that of *Johnsonia*, R.Br., but the bracteate scapes, the white woolly turbinate heads, and the fact that only the outer flowers develop fruit seem to afford sufficient grounds for establishing this new genus. It may be observed that it is established on perfect flowering specimens of *Xerotes turbinata*, Endl. Apparently perfect flowers were not known to that botanist, yet, as he evidently saw the fruit, it is strange that no comments were made on its remarkable structural divergence from that of the true *Xerotes*. Bentham did not see specimens in flower or fruit. The abortive ovary referred to by that authority evidently belonged to a neuter flower. Although I have numerous examples before me I have failed to find any trace of the spreading stigmatic lobes referred to by him.

H. TURBINATA.

Xerotes turbinata, Endl., Pl. Preiss. ii. 51; Benth., Fl. Aust. vii 107.

Forming tufts 6 inches or more across. Leaves rigid, striate, terete, tapering into an almost pungent point, straight or slightly twisted, 6-12 inches long, the outer ones reduced to numerous sheathing scales with scarious woolly-ciliate margins, when old splitting into numerous filaments. Scapes rather stout, bracteate from above the middle, 1-2½ inches high, with a turbinate or ovoid head of flowers attaining with the bracts a diameter of $\frac{1}{2}$ - $\frac{3}{4}$ inch. Bracts loosely imbricated, ultimately forming an involucre round the head, the lowest about 1 inch long, the others varying to $\frac{1}{4}$ inch, brown, lanceolate-acute, with scarious woolly-ciliate margins. Flowers pale yellow, several within each head, on filiform pedicels of $\frac{1}{4}$ - $\frac{1}{2}$ line long, the outer (hermaphrodite) ones subtended by a small scarious bract, the whole surrounded by white woolly hairs almost concealing the flower, the inner (neuter) ebracteate, the subtending hairs numerous. Perianth about 2 lines long, divided $\frac{2}{3}$ of its length into 6 subulate nerveless segments, the inner broader than the outer; tube narrow-turbinate. Filaments extremely short. Capsule pale green, smooth or slightly transversely streaked, trigonous-ovate, acute, 2 lines long, readily dehiscent. Seeds ovate, about $\frac{1}{2}$ line long.

Loc.—Swan River District; in sandy or heathy spots, flowering during December (Drummond, Preiss, and others).

AMARYLLIDÆ.

CONOSTYLIS HARPERIANA, sp. nov.

Stems short, densely tufted. Leaves not distichous, with short sheathing bases, glabrous, striate, rigid, with entire or finely serrulate margins, 1½ lines broad, mostly under a foot in length. Scapes, including the inflorescence, 12-15 inches long, slightly tomentose, bearing 2-3 thin lanceolate-acuminate bracts of 1-1½ inches long. Flowers golden yellow, numerous, in loosely branched bifurcated cymes, with usually a single pedicellate flower or small

cyme lower down. Pedicels $\frac{1}{2}$ line long, subtended by linear scarious bracts of 4-6 lines long. Perianth infundibuliform, 4-5 lines long, plumose-tomentose outside, almost or quite glabrous within. Segments lanceolate-linear, slightly longer than the free part of tube. Anthers oblong, on equal, extremely short, flattened filaments. Placentas shortly stipitate, covered all over with numerous ovules; styles stout, conspicuously hooked at the end. Ripe fruit not seen.

Loc.—Near the margin of a lagoon 6-7 miles N.E. of Bayswater (W. V. Fitzgerald; November, 1902).

This pretty species usually forms tufts of one foot or more across and bears a close relation to *C. cymosa*, F.v.M., differing in the scapes always longer than the leaves, in scantiness of tomentum, and in the proportionate length of the perianth-segments. Not only has this species a peculiar inflorescence, but the hooked style seems to be exceptional for the genus.

I have dedicated the species to Hon. C. Harper, M.L.C., of Woodbridge, W.A., a gentleman who, in years gone by, did a great deal towards elucidating our native flora.

CENTROLEPIDÆ.

CENTROLEPIS INCONSPICUA, sp.nov.

Minute, slightly tufted and glabrous. Scapes almost none within a few erect, linear, somewhat flaccid leaves of 1-1 $\frac{1}{2}$ inches long, with very broad, scarious, sheathing bases, the inner ones not reduced. Floral bracts close together, ovate, glabrous, erect, 2 lines long, with membranous margins, terminating in leaf-like awns of $\frac{3}{4}$ -1 $\frac{1}{4}$ inches long, the lowest the longest. Flowers in each bract 2, intermixed with rather numerous, prominent, unequal, broad-linear chaffy scales, obtuse, acute or occasionally the shorter ones slightly jagged, one by the side of each ovary and one under each stamen, with several others adjacent. Carpels of the ovary apparently constantly 2.

Loc.—Pinjarrah; in wet spots (W. V. Fitzgerald; October, 1900).

Differs from *C. aristata*, Rœm. et Schult., principally in the leaves and fewer parts to the flower. In foliage and habit it approximates to *C. humillima*, F.v.M.

RESTIACEÆ.

RESTIO STENOSTACHYUS, sp.nov.

Rhizome rather stout, creeping, enveloped in reddish wool. Stems slender, erect or flexuose, simple or with few branches, terete, sulcate, glabrous, 1-2 feet high. Sheathing scales closely appressed, pale brown, mucronate, with tufts of reddish wool in the axis. Floral bract similar, closely embracing the base of the spikelet. Spikelets in both sexes of a reddish colour, solitary and terminating the branches, or with 1-2 axillary lower down, from narrow-ovate and 2 lines to cylindrical and $\frac{3}{4}$ inch or more in length. Flowers numerous within each spikelet. Male spikelet with 2 empty glumes, lanceolate-ovate, tapering into acute rigid points, ciliate on the bracts and margins with woolly hairs; flowering glumes similar. Perianth very flat, segments 6, 2 outer ones lanceolar, complicate, ciliate on the back with reddish wool, 4 inner ones flat and almost hyaline. Anthers red, much exerted. Rudimentary ovary minute.

Female spikelets with glumes rather broader than in the males, with white, scarious, ciliate margins, a little reddish wool on the back, 3 outer empty ones. Perianth similar to the male. Staminodia minute or none. Ovary flat, 2-celled; styles slightly connate at the base, nearly as long as the ovary and much exerted, stigmatic in the upper half. Ripe capsule not seen.

Loc.—Burswood; in wet spots (♀; in March, 1900); near Causeway, Perth (♂; April, 1901; W. V. Fitzgerald).

In habit and inflorescence approximates to *R. deformis*, R.Br., but differs materially in the vestiture and the structure of the spikelet.

HYPOLÆNA FASCICULATA, sp.nov.

Rhizome tufted, slightly woolly. Stems pubescent with white spreading hairs, rarely glabrous, under 18 inches high; branches

numerous, flexuose, slender, in irregular fascicles. Sheathing scales broad, appressed, produced into linear laminae of 3-6 lines. Male spikelets solitary, terminating numerous fascicled branchlets, the subulate bracts continuous, broadly ovoid, 2 lines long, with numerous flowers. Glumes broad, brown with slightly scarious margins, shortly aristate, a few outer ones short and empty. Perianth-segments 6, narrow hyaline, obtuse, the 2 outer ones slightly complicate and longer than the others. Anthers on long filaments. Female spikelets not numerous, sessile, solitary and terminal, the subtending bract continuous or 2, the second sessile lower down, narrow-acuminate, 3 lines long. Glumes 5, the 2 outer ones foliaceous, short, terminating in linear points; 3 inner ones rather long, ovate-lanceolate, acute, brown and slightly hairy on the backs. Perianth-segments 6, thin, hyaline, broad, notched at the top, shorter than the ovary. Style long, divided to the middle into 3 filiform branches stigmatic almost to the base. Nut pale-coloured, ovoid, very hard, nearly 1 line long, on a thick receptacle.

Loc.—Canning Plains ($\delta\text{♀}$; 1st January, 1903; W. V. Fitzgerald).

Closely allied to but apparently distinct from *H. fastigiata*, R.Br.

CYPERACEÆ.

CYATHOCHLETE TERETIFOLIA, sp.nov.

Rhizome tufted. Stems very rigid, attaining a height of 4 feet, terete below the inflorescence, striate, with a sheathing bract at or above the middle, ending in a long leaf-like lamina. Leaves terete or slightly compressed, not numerous, nearly as wide as the stems, quite erect, tapering into long slender points; sheaths crowned at the summit with a small membranous margin. Panicle very long and narrow, with numerous long, erect branches, several together in each bract. Lower floral bracts with long partially open sheaths, with a hyaline margin at the orifice and ending in long, linear, flattened laminae, the upper ones becoming gradually abbreviated. Spikelets few on each peduncle, nearly 1

inch long, pale-coloured, linear-lanceolate, acuminate. Glumes 4, not distichous, all aristate, the 2 outer empty ones shorter. Hypogynous bristles in the hermaphrodite flower rather long, ciliate at the end, absent from the lower barren flower. Stamens 2, and style with two slender branches, much longer than the glume. Ripe fruit not seen.

Loc.—Bayswater; in swamps (December, 1901; W. V. Fitzgerald).

Closely allied to *C. arenacea*, Benth., differing in larger habit and inflorescence and in the terete foliage.

SCHÆNUS CÆSPITITIUS, sp. nov.

Rhizome tufted. Stems 1-2 feet high, slender, erect, rush-like, rigid, finely striate, leafless excepting the dark brown leaf-sheaths at the base. Leaf-sheaths rather closely appressed, hastellate at the orifice with spreading white hairs, the inner ones terminating in semiterete, rigid, often flexuose laminae of 1-3 inches. Panicle terminal, usually turned to one side, 1-2½ inches long. Lower floral bracts similar to the inner basal sheaths, the upper gradually shorter. Spikelets in clusters of 2-4, mostly 3, on nearly equal pedicels, of 1-3 lines long, spreading, lanceolate-acuminate, dark brown, slightly compressed, about 6 lines long, containing 3 flowers, the lowest abortive, the 2nd maturing fruit, the upper usually diseased and forming a globular white-woolly mass. Glumes lanceolate-ovate, strongly keeled, margins ciliate with white-woolly hairs, 6-8 outer empty ones gradually shorter, the lower 2 minute. Hypogynous bristles unequal, acute, shorter than the nut. Stamens 3. Nut brown, narrow-ovate, trigonous, finely muricate, $\frac{3}{4}$ line long.

Loc.—Serpentine (September, 1901), near Perth (October, 1902; W. V. Fitzgerald); Torbay Inlet (December, 1902; H. Sheath).

The species bears some resemblance to *S. fascicularis*, Nees, but differs in the larger habit and in the spikelets and nut. The hastellate leaf-sheaths and presence of hypogynous bristles removes it from *S. brevifolius*, R.Br. It has a close affinity to

S. melanostachyus, R.Br., but differs in the more numerous empty glumes, in the lowest flower not perfecting fruit, and in the nut.

SCHÆNUS LEVIGATUS, sp.nov.

Rhizome shortly creeping. Stems glabrous, erect, straight or slightly flexuose, faintly striate, rigid, 1-1½ feet high, leafless excepting the numerous shining dark brown sheaths at the base and often one at or above the middle. Inner basal and stem-sheath with a membranous margin and terminating in a subulate compressed lamina of 4-6 lines long. Panicle rather loose but narrow, 1½-3 inches long, with sometimes a small cluster from the stem-sheath. Lower floral bracts similar to the sheaths, the upper gradually smaller. Spikelets in each bract in clusters of 2-5 (usually 4) on very unequal slender pedicels of 1-2 inches long, erect, ovate-lanceolate, brown, 4-5 lines long, compressed, containing 2 flowers, both fertile. Glumes acute, 3-5 empty outer ones gradually shorter, all slightly woolly-ciliate near the apex. Hypogynous bristles 6 or fewer, ciliate, unequal, 3 often much longer than the nut. Stamens 3. Nut dark brown, ovate, obtusely trigonous, rugose, ¾ line long.

Loc.—Bayswater (November, 1901; W. V. Fitzgerald).

Approximates to *S. brevifolius*, R.Br., differing principally in the bracteate stem, smaller spikelets with fewer flowers, and in the presence of hypogynous bristles. It differs already from *S. pedicellatus*, Benth., and *S. fascicularis*, Nees, in the membranous margined and not bearded sheaths.

SCHÆNUS LAXUS, sp.nov.

Rhizome tufted. Stems glabrous, erect, terete or slightly compressed, slender, faintly striate, 1½-2 feet high. Leaves basal, few, almost subulate, with dark-coloured hooked points, 1½-3 inches long; sheaths pale brown, slightly appressed, the innermost 2-2¼ inches long, the orifices barbellate with long hairs. Panicle very loose, the spikelets on slender pedicels of 2-2½ inches, forming clusters in the axils of dark brown sheathing bracts which often terminate in subulate hooked laminae of 1 inch.

Spikelets lanceolate, acute, compressed, 3-3½ lines long, 2-flowered, the upper maturing fruit. Glumes acute, with a prominent black dark brown keel, the brown membranous margins scantily ciliate, 4-5 outer empty ones gradually shorter. Hypogynous bristles very unequal, 2 about $\frac{1}{3}$ as long as the nut, acuminate, slightly ciliate. Stamens 3. Nut whitish, obovate, obtusely trigonous, almost stipitate, minutely granular, $\frac{1}{2}$ line long.

Loc.—Near Torbay Inlet (December, 1902; H. Sheath).

This species is allied to *S. indutus*, F.v.M., differing principally in the stems being constantly glabrous, in the bearded orifices to the leaf-sheaths, and in the upper flower alone developing fruit. Externally the spikelet bears a close resemblance to that of *S. Rodwayanus*, W. V. Fitzg., but the structure and nut are very different.

SCHÆNUS ANDREWSII, sp.nov.

Rhizome tufted. Stems rigid, erect, terete, deeply striate, resinous-scabrous, 1-1½ feet high, leafless except several loose sheathing bracts at the base, 1 or 2 inner ones rather long, brown or almost hyaline and terminating in subulate, striate, slightly resinous laminae of 1-2 inches, lower sheaths dark brown and shining, the orifice glabrous or slightly ciliate. Panicle very narrow, 1½-2 inches long. Floral bracts shortly sheathing, the lower one ending in a leaf-like lamina sometimes longer than the inflorescence. Spikelets 1-2 in each bract, the second one always shortly pedicellate, pale brown, ovate-lanceolate, slightly resinous, 3½ lines long, with 2 flowers, the second maturing fruit. Glumes mucronate, slightly ciliate, 2-3 outer empty ones. Hypogynous bristles small, ciliate. Stamens 3. Style with 3 plumose stigmatic lobes. Nut brown, narrow-ovate, trigonous, tuberculate, nearly 1 line long, shortly stipitate and crowned by the hardened base of the style.

Loc.—Cannington; in heathy or sandy spots (C. R. P. Andrews, young flowers, November, 1902: W. V. Fitzgerald, flower and fruit, January, 1903).

Apparently this species has no immediate ally. The nut is quite that of *Elynanthus*. In the proximity of the flowers and

in the upper flower only maturing fruit it agrees with *Tricostularia*. All the other characters are those of true *Schoenus*. The resinous-scabrous character of the species serves to distinguish it at a glance from all others.

Named after the original discoverer, Mr. C. R. P. Andrews, Principal of the Training College, Claremont, W.A.

The following species have not hitherto been recorded from Western Australia:—

CHENOPODIACEÆ.

ANISACANTHA (BASSIA) LONGICUSPIS, F.v.M.

Kalgoorlie (W. V. Fitzgerald; August, 1898).

GRAMINEÆ.

STIPA TUCKERI, F.v.M.

Credo Mine, between Broad Arrow and Black Flag (W. V. Fitzgerald; September, 1898).

